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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,249	09/24/2003	Hongwei Wang	1875.5090000	4291

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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
1100 NEW YORK AVE., N.W.  
WASHINGTON, DC 20005

EXAMINER
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NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

MAIL DATE	DELIVERY MODE
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05/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/668,249	<b>Applicant(s)</b> WANG, HONGWEI	
	<b>Examiner</b> DANNY NGUYEN	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/26/2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed 2/26/2008 with respect to claims 1, 9, and 17 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1, 9, and 17 rejection based on 35 U.S.C 112 2<sup>nd</sup> is withdrawn as these claims have amended to eliminate the indicated problem.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 6, 10, 11, 13, 14, 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yu. (USPN 5,361,185).

Regarding claims 1, 9, Yu discloses a system (figure 1) comprises

a circuit (Q3) comprising an n type, the n type transistor adapted to comply with an operational requirement,

an ESD protection system (10) adapted to comply with an ESD requirement, and a pad (14),

wherein the ESD protection system (10) is connected in series between the pad and the n type transistor and substantially eliminates ESD from flowing from the pad into the n type transistor (e.g. see col. 4, lines 63-68, col. 5, lines 1-4), and

the size of the n-type transistor (Q3, see col. 3, lines 55-57) and the size of the ESD protection system (see col. 4, lines 4-6) collectively are less than the size of single n type transistor (e.g. Q2 has a area 272, see col. 3, lines 44-48) adapted to comply with the operational and ESD requirements (the total sizes of Q3 and Q4 is less than the size of Q2).

Regarding claims 3, 11, Yu discloses the circuit comprises NMOS transistor (NMOS transistor Q3).

Regarding claims 5, 6, 13, 14, Yu discloses the ESD protection (10) comprises n type transistor (NMOS transistor Q4).

Regarding claim 17, Yu discloses a system (figure 1) comprises a circuit (NMOS transistor Q3) comprising an n type, the n type transistor adapted to comply with an operational requirement;

one of a NMOS, an a PMOS transistor (NMOS transistor Q4 of the ESD protection 10) adapted to comply with an ESD requirement, and

a pad (pad 14),

wherein the one of the NMOS transistor and the PMOS transistor is connected in series between the pad and the n type transistor and substantially eliminates ESD from flowing from the pad into the circuit (see col. 4, lines 63-68, col. Col. 5, lines 1-4), and the size of the n type transistor (the size of Q3, see col. 3, lines 55-57) and the one of NMOS transistor and the PMOS transistor (the size of NMOS transistor Q4, see col. 4, lines 4-6) collectively is less the size of a single n type transistor (the size of transistor Q2, see col. 3, lines 44-48) adapted to comply with the operational and ESD requirement.

Regarding claims 18-20, Yu discloses the size of the n type transistor (NMOS transistor Q3) and the size of the ESD protection system (the size of NMOS transistor Q4) are less than 400 micrometer x 8 micrometer (see col. 3, lines 44-48, lines 55-57, col. 4, lines 4-6).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu in view of Tamakoshi (USPN 5,499,152).

Regarding claims 4 and 12, Yu discloses all limitations of claims 1 and 9 as discussed above, but Yu does not disclose the ESD protection system comprises a resistor as claimed.

Tamakoshi discloses an ESD protection system (figure 4) comprises a resistor (the resistor R).

It would have been obvious to have one of ordinary skill in the art at the time the invention was made to have modified the ESD protection system of Yu to incorporate a resistor as disclosed by Tamakoshi in order to provide further the ESD protection system being damaged from a surge voltage situation.

5. Claims 7, 8, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu in view of Clark (USPN 3,746,946).

Regarding claims 7, 8, 15, 16, Yu discloses all limitations of claims 1 and 9 as discussed above, but Yu does not disclose the ESD protection system comprises a PMOS transistor as claimed.

However, providing a an ESD protection which comprises a PMOS transistor is well known in the art, selecting the protection which includes a NMOS type or PMOS type is based on the design constraints imposed by the system in the PMOS type is designed to be used. It would have been obvious to have one of ordinary skill in the art at the time the invention was made to have modified the NMOS transistor of ESD protection system of Yu to incorporate a PMOS transistor based on such the design constraints because this is a known type protection as disclosed by Clark (see col. 3, lines 12-25).

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANNY NGUYEN whose telephone number is (571)272-2054. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL SHERRY can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Danny Nguyen/  
Examiner, Art Unit 2836

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